Claim 1 (currently amended): A system for demonstrating signal cascades that occur in certain cells when certain stimuli are introduced, comprising:

- (a) a <u>dynamic</u> database <u>of comprising definitions relating to</u> known cellular components, and reactions and concepts; and
- (b) an inference engine for generating signal cascades, wherein the inference engine is linked to the <u>dynamic</u> database.

Claim 2 (currently amended): The system of claim 1, wherein the <u>dynamic</u> database <u>further</u> comprises concepts, events and attributes.

Claim 3 (original): The system of claim 2, wherein said concepts are adapted to inherit from other concepts.

Claim 4 (original): The system of claim 2, wherein said concepts contain other concepts.

Claim 5 (original): The system of claim 2, wherein said concepts exclude other concepts.

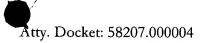
Claim 6 (original): The system of claim 2, wherein said concepts are capable of joining other concepts.

Claim 7 (original): The system of claim 2, wherein said concepts are associated with said attributes.

Claim 8 (currently amended): The system of claim 2, wherein said attributes comprise indicia of size, shape, color, location of a graphic, time, or species.

Claim 9 (currently amended): The system of claim 2, wherein said <u>dynamic</u> database comprises signal transduction information.

Q.



Claim 10 (currently amended): The system of claim 2, wherein said <u>dynamic</u> database comprises pathology information.

Claim 11 (currently amended): The system of claim 2, wherein said <u>dynamic</u> database comprises information specific to chemical areas.

Claim 12 (original): The system of 11, wherein said information comprises signal transduction information on plant cellular environments or animal cellular environments.

Claim 13 (currently amended): The system of claim 1, wherein the <u>dynamic database</u> comprises data for binding constants, rate equations, reactant concentrations, primary sequences of functional sites in biomolecules or proteins, or efficacy of physical interactions with binding partners.

Claims 14-56 (withdrawn)